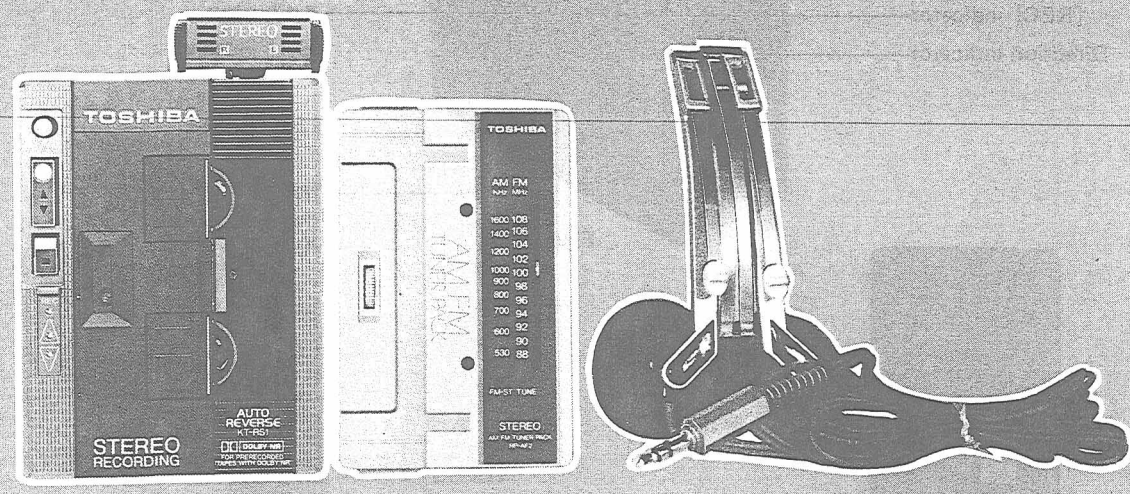
SERVICE DATA
FILE NO. 100-180

TOSHIBA

STEREO CASSETTE PLAYER

KT-RS1 (RP-AF2)



For Parts replacement in Tuner Pack, model RP-AF2, which is optional for KT-RS1 of "FY" version, refer to pages 18 to page 20 in this Service Data.

SPECIFICATIONS

■ Tape Section

Track system:	Stereophonic
Recording system:	AC bias
Erasure system:	Magnet erasure
Recommended tape:	Normal ferric, chrome dioxide, and metal alloy: C-30 to C-120
Tape speed:	4.8 cm/sec.
Frequency response:	Playback: Normal 40 Hz–14 kHz, Metal 40 Hz–16 kHz Total: Normal 60 Hz–10 kHz
Input terminals:	Mic jack [MIC] : 3.5 mm dia. stereo x 1, low impedance 200 ohm to 2 kohm Input level approx. 0.5 mV
Output terminals:	Headphone jack [PHONES] : 3.5 mm dia. stereo x 1, Impedance 32 ohm
Maximum output power:	Integration 40 mW (20 mW + 20 mW) with 32 ohm load
Power supply:	3V DC (SUM-3 "AA" x 2) External power source supplied to the [DC IN3V] jack (3.4 mm dia. centre contact negative)
Dimensions:	80.5 (W) x 108 (H) x 32 (D) mm
Weight:	309 g (including batteries but not the tuner pack)

■ Tuner Section

Receiving frequency:	FM: 88 MHz to 108 MHz AM: 525 kHz to 1605 kHz

- This FM/AM tuner pack (RP-AF2) is designed exclusively for this unit and KT-VS1, and is not usable in other types of cassette recorders.

Specifications are subject to change without notice.

TA, TC, AY, YY, FY
PRINTED IN JAPAN 22905191 Aug., 1983 Ⓢ

1. OPERATING CONTROLS

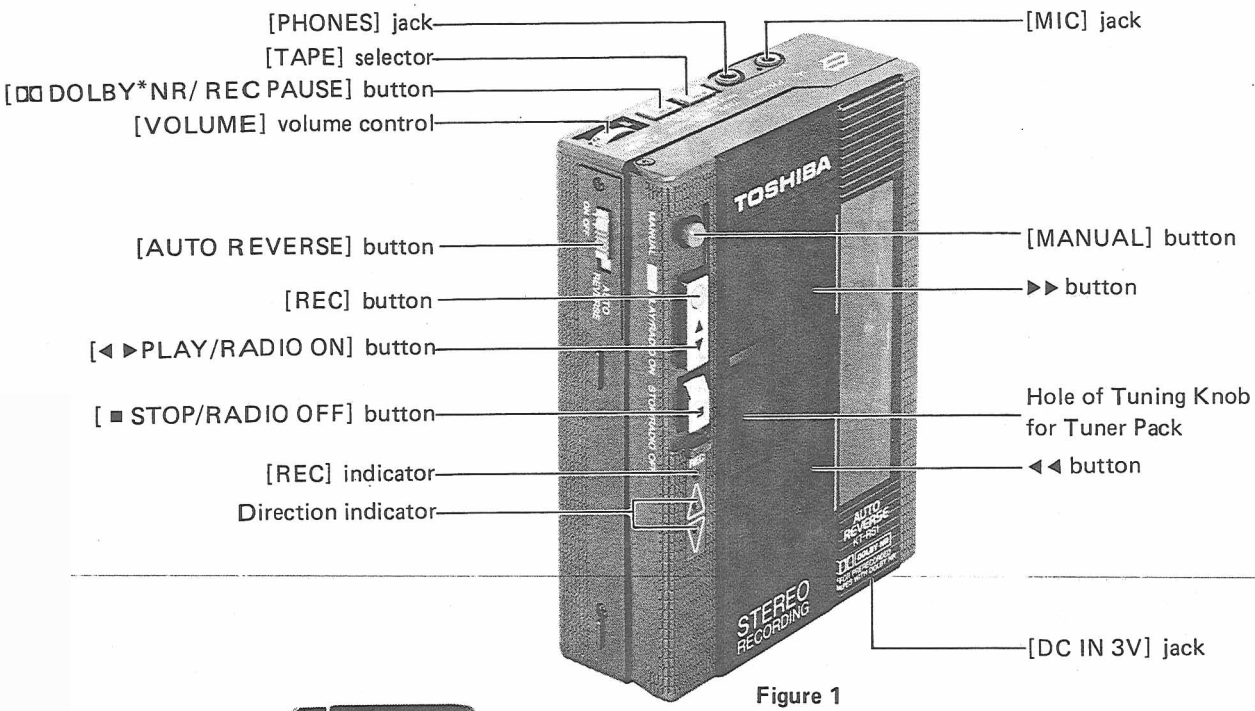


Figure 1

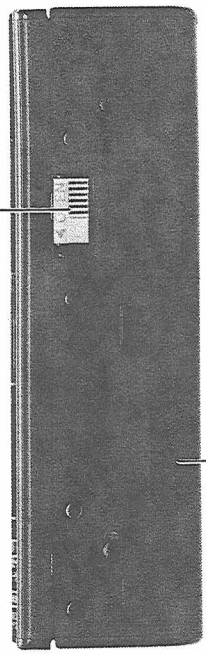


Figure 2

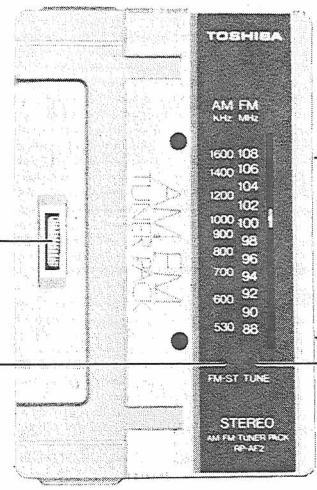
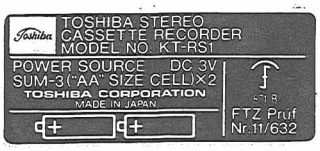
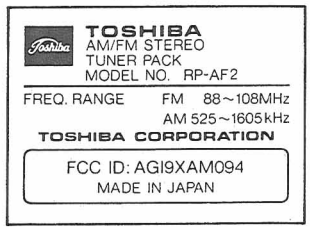


Figure 3

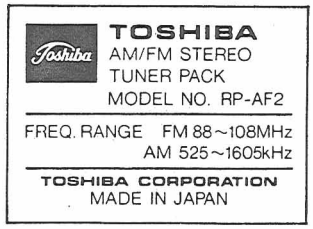
Name Label (KT-RS1)



Name Label (RP-AF2)
(TA, TC)



Name Label (RP-AF2)
(YY, AY)



CAUTION: Before returning the unit to the customer, check that the resistance between both blades of AC plug and any accessible metal parts is more than 3 MΩ after completion of servicing, using the circuit tester. (TA Model only)

2. DISASSEMBLY INSTRUCTIONS

— CASSETTE PLAYER SECTION —

■ **Removal of Front Cabinet**

1. Remove two screws Ⓐ provided at both front cabinet sides and the front cabinet will be removed.

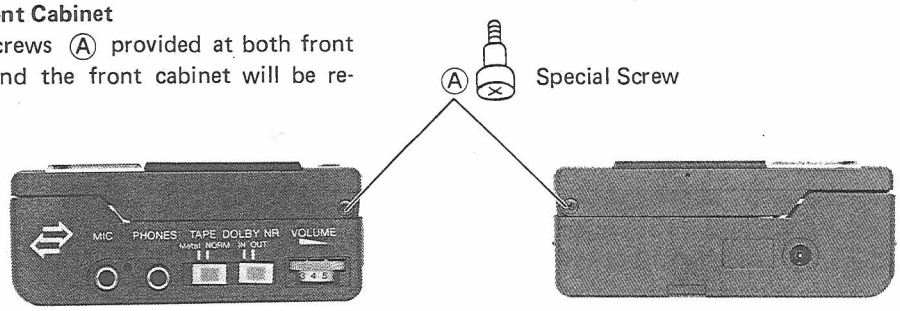


Figure 4

Figure 5

2. Removal of back cabinet
   Remove two screws Ⓑ and two screws Ⓒ securing mechanism assembly to the back cabinet, and the back cabinet will be removed.

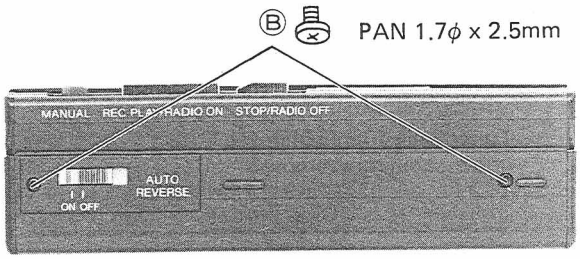


Figure 6

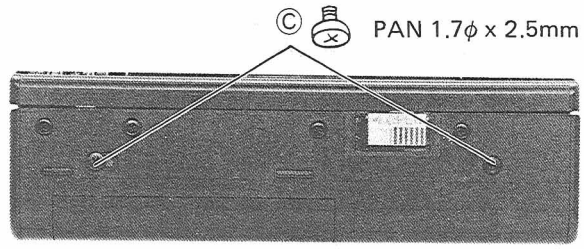


Figure 7

■ **Access to Main P.C.Board**

1. Remove the front cabinet.
2. Remove the back cabinet.
3. Remove three screws Ⓓ securing the P.C.Board to the mechanism assembly, and the front side of the main P.C.Board can be checked.

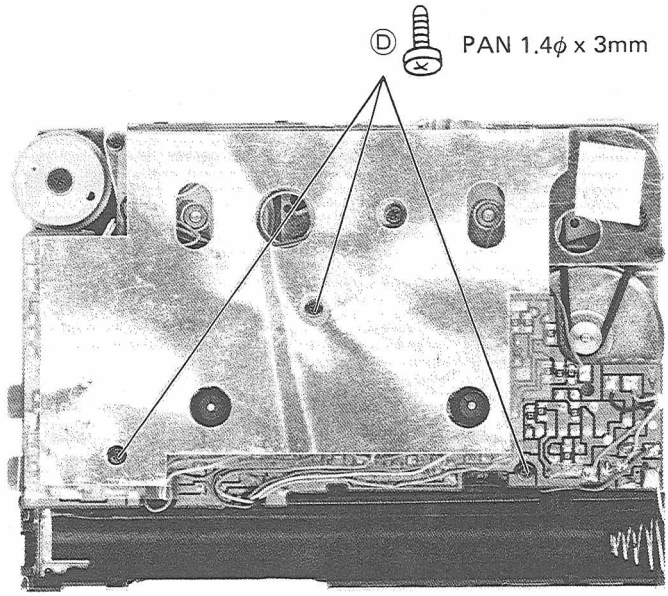


Figure 8

■ **Mechanism Assembly Check**

1. The mechanism assembly is provided beneath the main P.C. Board, so open the P.C. Board as started above and then the mechanism can be checked.

— TUNER PACK SECTION —

■ **Removal of Upper Cabinet**

1. Remove four screws Ⓕ securing bottom cabinet, and the upper cabinet will be removed.

■ **Access to P.C. Board**

1. Remove the upper cabinet.
2. Remove adhesive tape securing AM antenna coil to the bottom cabinet and release the coil, taking care not to broken wire leads connected to the P.C. Board.
3. The P.C. Board can be opened and accessed. (Refer to "Tuner Pack Check".)

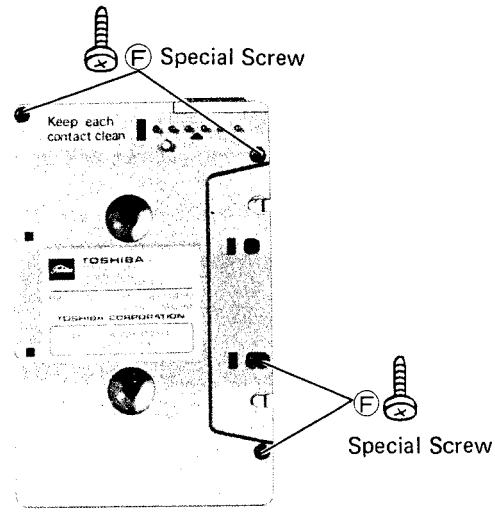


Figure 9

■ **TUNER PACK INSPECTION**

When repairing the tuner pack, inspect it according to the following procedures.

1. Remove two special screws from the front cabinet side of the cassette player and then remove the front. (Figure 10)
2. Load the tuner pack from which the upper cabinet is removed, into the cassette holder. (Figure 11)
3. Set the cassette player and the tuner in the play mode. In this case, insert a insulator packing between the cassette holder and the tuner pack in order for the connector not to detach from the cassette player. (Figure 12)
4. It is possible to inspect the rear side of the P.C. Board as shown in Figure 13.

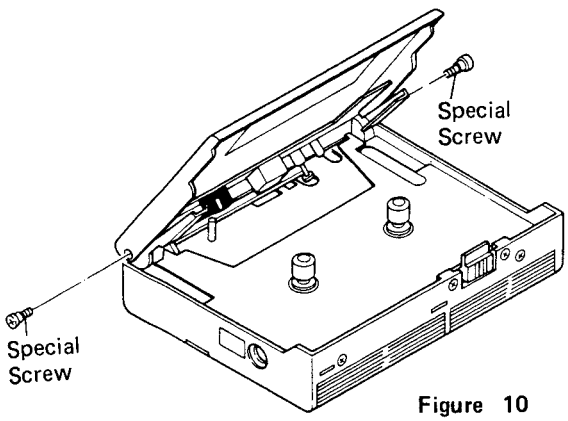


Figure 10

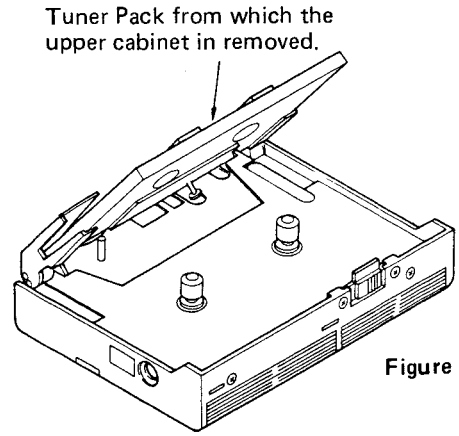


Figure 11

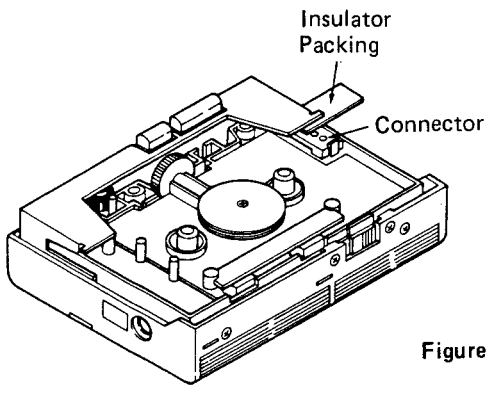


Figure 12

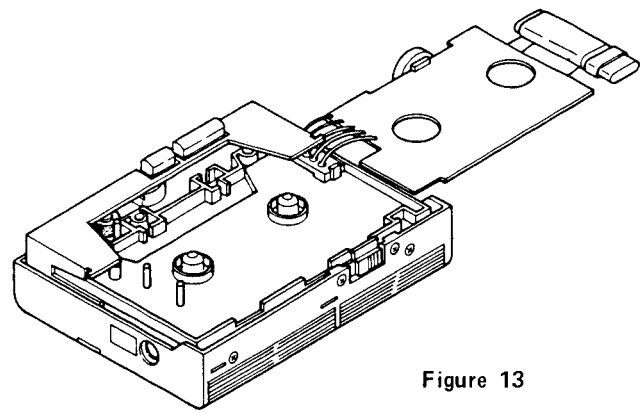


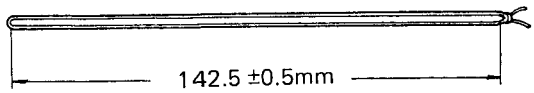
Figure 13

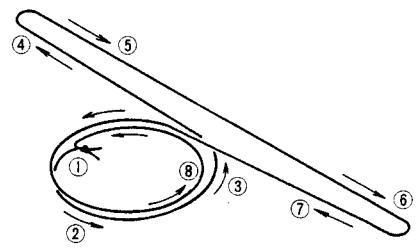
3. DIAL CORD RESTRINGING

■ **DIAL CORD STRINGING**

Replace the dial cord according the following procedures.

1. Turn the tuning knob counterclockwise fully (to the direction of lower frequency).
2. Wind the dial cord in numerical order.
3. Fix the dial pointer on the cord so as to fit the pointer margin to the marking line on the mould frame.





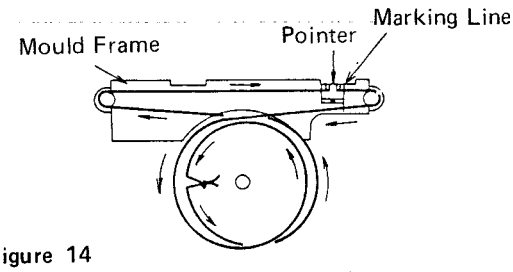


Figure 14

4. CHIP PARTS REPLACEMENTS

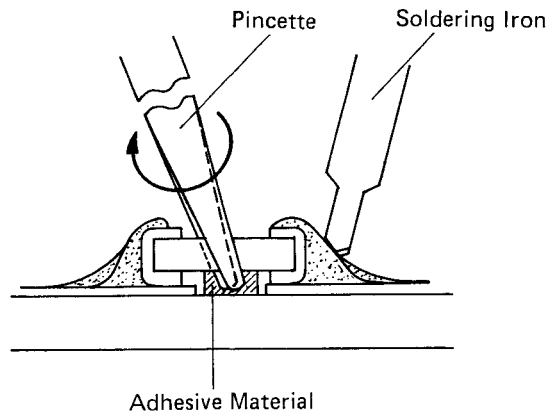


Figure 15

Unsoldering ICs and Other Semiconductor Tips

1. Hold the part as its center with pincette, etc. and apply heat at soldered section (a) and (b) alternatively with soldering iron tip. Remove the part by moving it to left and right while the solder does not harden.
2. Cut or broken the part at it center with a diagonal cutter and remove by unsoldering each terminal of the part.

Note: Parts removed by the method 2 above can not be reused. Transistors removed by the method 1 above amy be reused if they are removed carefully with less heat applied.

■ **Torque**

PLAY, REC	: Approx. 28 – 52g.cm
FF	: Approx. 60g.cm
REW	: Approx. 60g.cm

■ **Power Consumption**

TAPE	: Approx. 110mA (C-60, center position, vol-min)
	REC. 130mA (C-60, center position, vol-min)
FM	: Mono approx. 50mA (vol-min)
	Stereo approx. 53mA (vol-min)
AM	: Approx. 42mA (vol-min)

5. ALIGNMENT INSTRUCTIONS

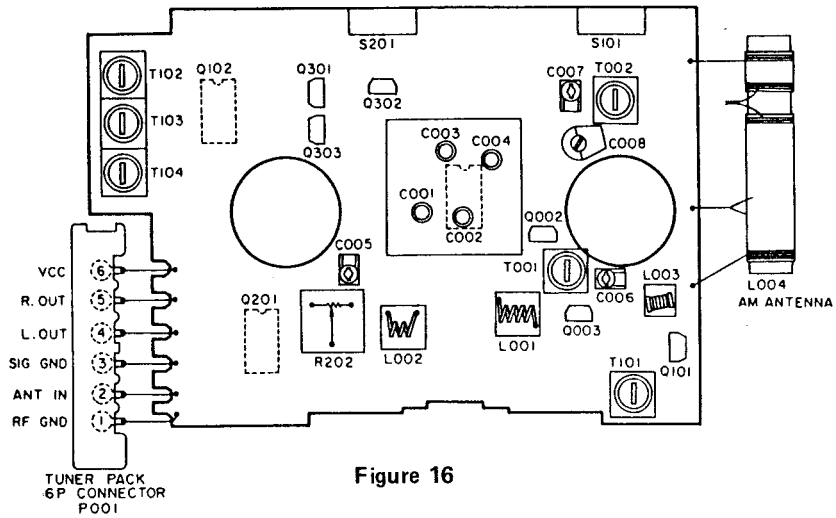


Figure 16

AM-IF ALIGNMENT

1. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
2. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
3. Connect the oscilloscope vertical input directly to the test point L or R and connect the shielded lead to the test point Earth.
4. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
5. Proceed as outlined in the AM-IF ALIGNMENT CHART.

AM-IF ALIGNMENT CHART

Step	Signal Coupling	Equip.	Tuning	Connection	Adjust. Point	Pattern
1	Connect sweep generator output to a loop antenna.	Sweep generator of 455 kHz center freq. with 455 kHz marker. (YY ... 460 kHz)	Tuning Knob fully counter-clockwise (Highest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	T102 T104	Adjust coil T102 and T104 until the best single peak is obtained.

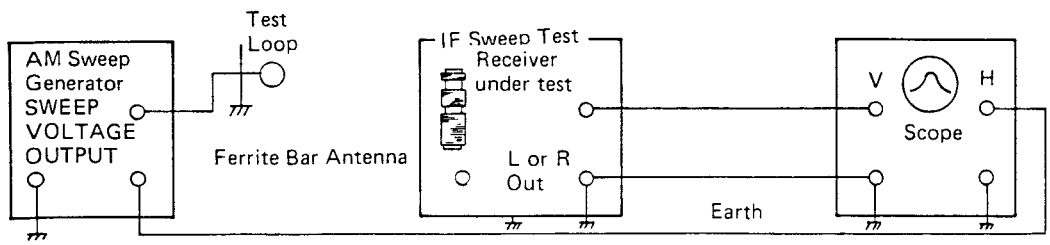


Figure 17

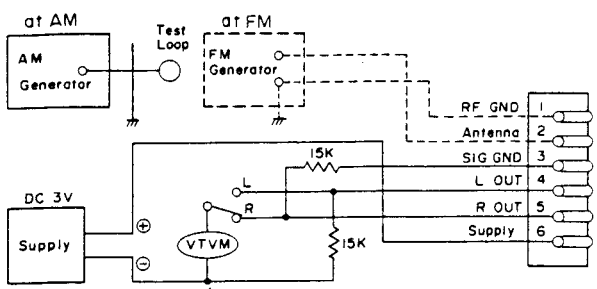


Figure 18

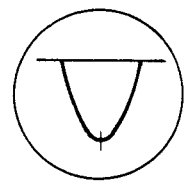


Figure 19

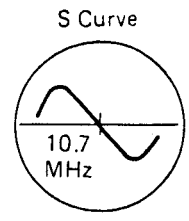


Figure 20

AM ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across a 15K ohm dummy load.
4. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
5. Proceed as outlined in the FM-RF ALIGNMENT CHART.

AM ALIGNMENT CHART

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	520 kHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OSC. Coil T102	Adjust for maximum output indication.
2	1650 kHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim C007	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	600 kHz	Tune to signal.	Ant. Coil L004	Adjust for maximum output indication.
5	1400 kHz		Ant. Trim. C008	
6	Repeat steps 4 and 5 as required.			

FM-IF ALIGNMENT

1. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
2. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
3. Connect the oscilloscope vertical input directly to the test point L or R and connect the shielded load to the test point Earth.
4. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
5. Process as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10 cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz meter.	Tuning Knob fully counter-clockwise (Highest Frequency)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" sweep generator output to horizontal axis "H".	T101 T103	Turn the coil T103 fully counterclockwise to obtain a single peak. Fig. 19 Adjust coil T101 in order until the best single peak is obtained. Finally turn the coil T103 to obtain S curve. Fig. 20

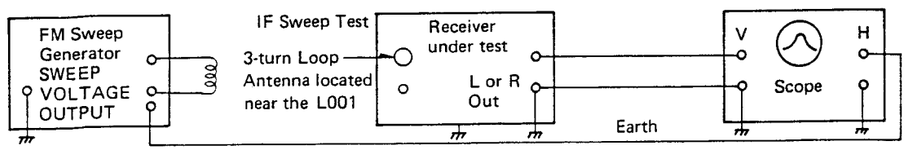


Figure 21

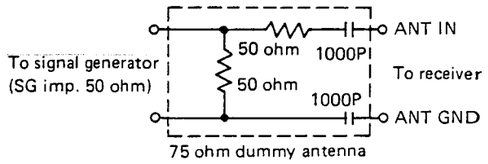
FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across a 15K ohm dummy load.
4. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
5. Proceed as outlined in the FM-RF ALIGNMENT CHART.

FM-RF ALIGNMENT CHART

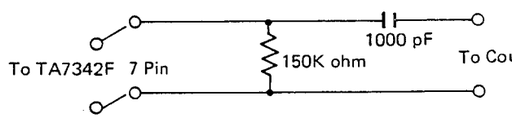
Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.5 MHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OSC. Coil L002	Adjust for maximum output indication.
2	108 MHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim C005	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal.	RF Coil L001	Adjust for maximum output indication.
5	106 MHz		Ant. Trim. C006	
6	Repeat steps 4 and 5 as required.			

CAUTION: When realigning the FM Receiving Frequency, the highest end of the frequency range should not be more than 108 MHz and the lowest end of the frequency range should not be less than 87.5 MHz, in order to comply with FTZ regulations in West Germany.



FREE RUN FREQUENCY ALIGNMENT

Adjust R202 under no signal condition so as to obtain 76 kHz ±150 Hz.



PLAYBACK HEAD ADJUSTMENT

A 6.3 kHz standard tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the EXT Speaker jack and adjust the azimuth by using a phillips screwdriver to maintain the maximum output voltage. Fig. 22

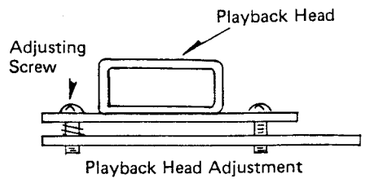


Figure 22

DOLBY LEVEL ADJUSTMENT

1. Preliminary Work
   1) Place function switch in "NORMAL" poaition.
   2) Place Dolby switch in "IN" position.
   3) Load MTT-150 (ATT-150) 400 Hz test tape.
   4) Connect a lead (terminated with alligator clip) of VTVM to Dolby output terminal and another lead to chassis ground.
2. Level Adjustment
   1) Playback the test tape.
   2) Adjust trimming pot semi-fixed resistor R491 (Lch), R492 (Rch) until output reading of 100mV ±8mV is obtained on the level meter, using alignment driver. (Proceed this alignment for both left and right channels.)

Note: When connecting alligator clip to the output terminal, clip it to a lead of C457 (Lch), C458 (Rch) (film type capacitor).

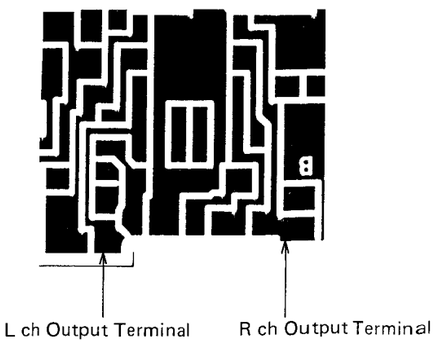
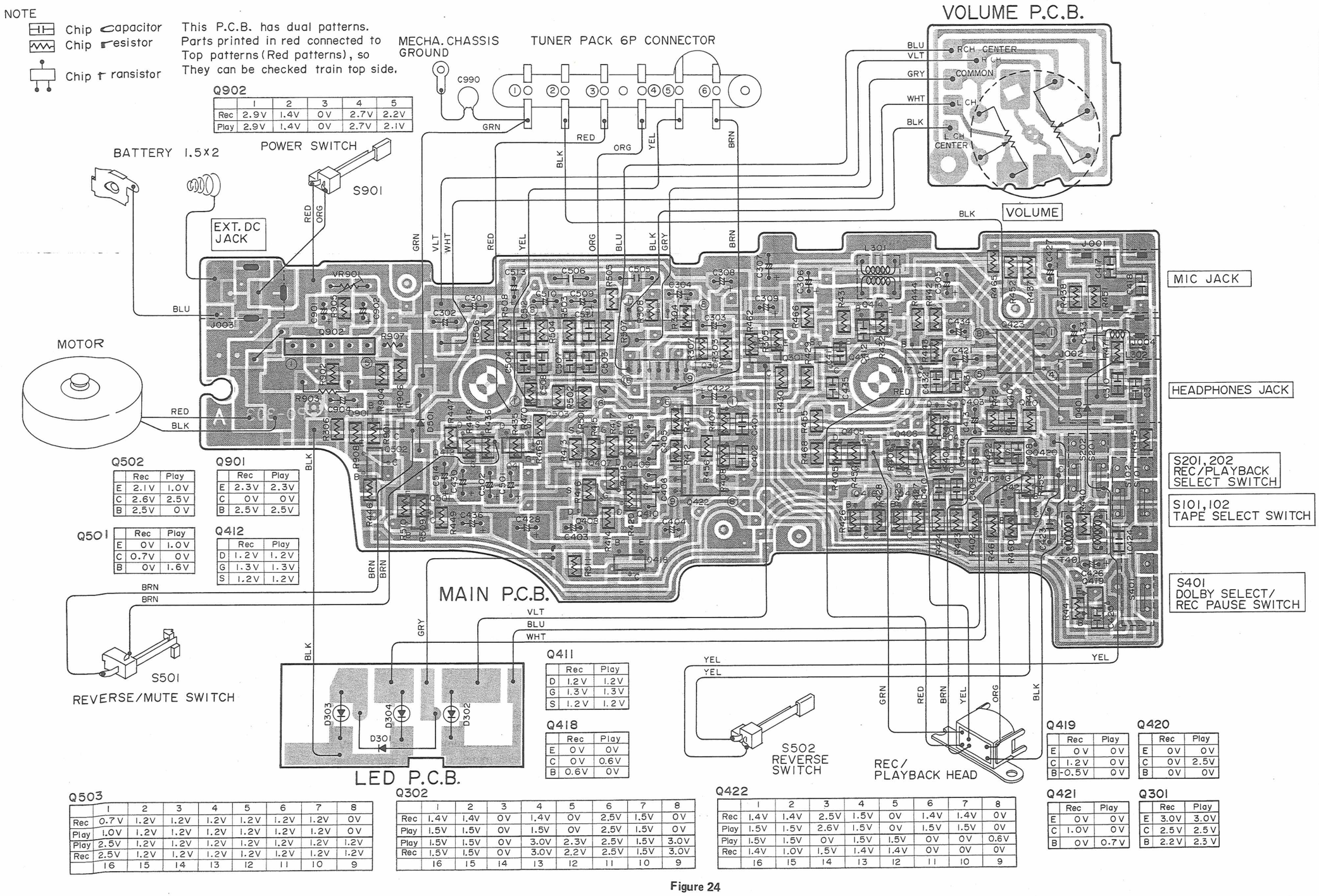


Figure 23

6-1. ELECTRICAL PARTS LOCATIONS

— CASSETTE PLAYER SECTION —



Q902

	1	2	3	4	5
Rec	2.9V	1.4V	0V	2.7V	2.2V
Play	2.9V	1.4V	0V	2.7V	2.1V

Q502

	Rec	Play
E	2.1V	1.0V
C	2.6V	2.5V
B	2.5V	0V

Q901

	Rec	Play
E	2.3V	2.3V
C	0V	0V
B	2.5V	2.5V

Q501

	Rec	Play
E	0V	1.0V
C	0.7V	0V
B	0V	1.6V

Q412

	Rec	Play
D	1.2V	1.2V
G	1.3V	1.3V
S	1.2V	1.2V

Q411

	Rec	Play
D	1.2V	1.2V
G	1.3V	1.3V
S	1.2V	1.2V

Q418

	Rec	Play
E	0V	0V
C	0V	0.6V
B	0.6V	0V

Q503

	1	2	3	4	5	6	7	8
Rec	0.7V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	0V
Play	1.0V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	0V
Play	2.5V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V
Rec	2.5V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V
	16	15	14	13	12	11	10	9

Q302

	1	2	3	4	5	6	7	8
Rec	1.4V	1.4V	0V	1.4V	0V	2.5V	1.5V	0V
Play	1.5V	1.5V	0V	1.5V	0V	2.5V	1.5V	0V
Play	1.5V	1.5V	0V	3.0V	2.3V	2.5V	1.5V	3.0V
Rec	1.5V	1.5V	0V	3.0V	2.2V	2.5V	1.5V	3.0V
	16	15	14	13	12	11	10	9

Q422

	1	2	3	4	5	6	7	8
Rec	1.4V	1.4V	2.5V	1.5V	0V	1.4V	1.4V	0V
Play	1.5V	1.5V	2.6V	1.5V	0V	1.5V	1.5V	0V
Play	1.5V	1.5V	0V	1.5V	1.5V	0V	0V	0.6V
Rec	1.4V	1.0V	1.5V	1.4V	1.4V	0V	0V	0V
	16	15	14	13	12	11	10	9

Q419

	Rec	Play
E	0V	0V
C	1.2V	0V
B	0.5V	0V

Q421

	Rec	Play
E	0V	0V
C	1.0V	0V
B	0V	0.7V

Q420

	Rec	Play
E	0V	0V
C	0V	2.5V
B	0V	0V

Q301

	Rec	Play
E	3.0V	3.0V
C	2.5V	2.5V
B	2.2V	2.3V

Q401, 402

	Rec	Play
D	1.2V	0.6V
G	1.0V	0V
S	1.2V	1.5V

Q403

	Rec	Play
D	1.2V	0.6V
G	0V	1.2V
S	1.4V	1.5V

Q404

	Rec	Play
D	1.2V	1.5V
G	0V	1.2V
S	1.4V	1.5V

Q405, 406

	Rec	Play
D	1.4V	1.5V
G	0V	0V
S	1.4V	1.5V

Q407, 408

	Rec	Play
D	1.2V	1.5V
G	0V	0V
S	1.2V	1.5V

Q409

	Rec	Play
D	1.0V	1.5V
G	1.2V	0V
S	1.2V	1.5V

Q410

	Rec	Play
D	1.2V	1.5V
G	1.3V	0V
S	1.2V	1.5V

Q414

	Rec	Play
E	2.5V	2.5V
C	0V	0V
B	2.5V	2.5V

Q415

	Rec	Play
E	0V	0V
C	1.0V	0V
B	0.7V	0V

Q416

	Rec	Play
E	0V	0V
C	1.0V	0V
B	0.7V	0V

Q417

	Rec	Play
E	0V	0V
C	2.5V	2.6V
B	0V	0V

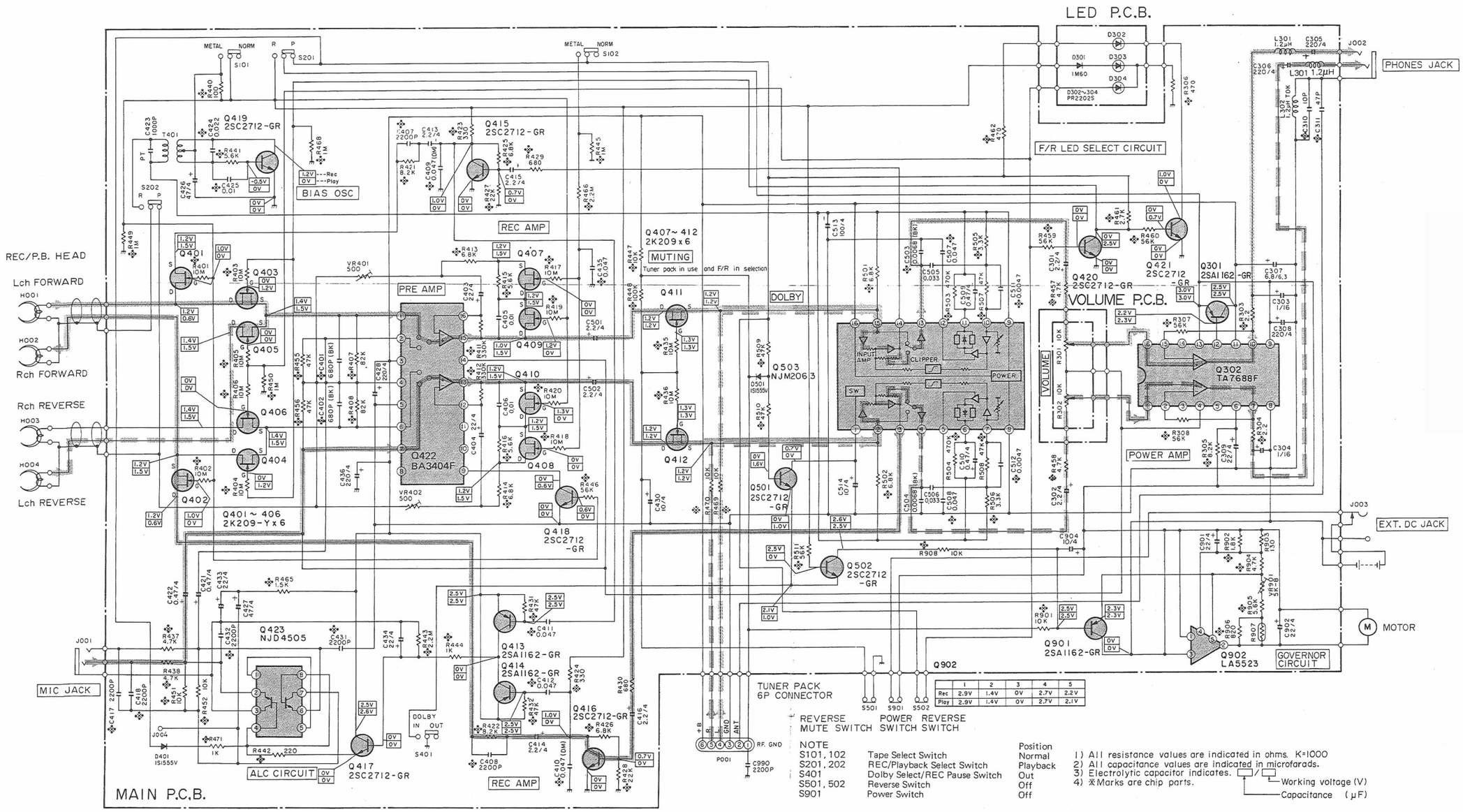
Q413

	Rec	Play
E	2.5V	2.5V
C	0V	0V
B	2.5V	2.5V

Figure 24

7-1. SCHEMATIC DIAGRAM

— CASSETTE PLAYER SECTION —



Q422	1	2	3	4	5	6	7	8
Rec	1.4V	1.4V	2.5V	1.5V	0V	1.4V	1.4V	0V
Play	1.5V	1.5V	2.6V	1.5V	0V	1.5V	1.5V	0V
Play	1.5V	1.5V	0V	1.5V	1.5V	0V	0V	0.6V
Rec	1.4V	1.0V	1.5V	1.4V	1.4V	0V	0V	0V
	16	15	14	13	12	11	10	9

Q503	1	2	3	4	5	6	7	8
Rec	0.7V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	0V
Play	1.0V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	0V
Play	2.5V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V
Rec	2.5V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V
	16	15	14	13	12	11	10	9

Q302	1	2	3	4	5	6	7	8
Rec	1.4V	1.4V	0V	1.4V	0V	2.5V	1.5V	0V
Play	1.5V	1.5V	0V	1.5V	0V	2.5V	1.5V	0V
Play	1.5V	1.5V	0V	3.0V	2.3V	2.5V	1.5V	3.0V
Play	1.5V	1.5V	0V	3.0V	2.2V	2.5V	1.5V	3.0V
	16	15	14	13	12	11	10	9

Q902	1	2	3	4	5
Rec	2.9V	1.4V	0V	2.7V	2.2V
Play	2.9V	1.4V	0V	2.7V	2.1V

NOTE

		Position
S101, 102	Tape Select Switch	Normal
S201, 202	REC/Playback Select Switch	Playback
S401	Dolby Select/REC Pause Switch	Out
S501, 502	Reverse Switch	Off
S901	Power Switch	Off

1) All resistance values are indicated in ohms. K=1000
2) All capacitance values are indicated in microfarads.
3) Electrolytic capacitor indicates. C / 16 — Working voltage (V); Capacitance (μF)
4) ※Marks are chip parts.

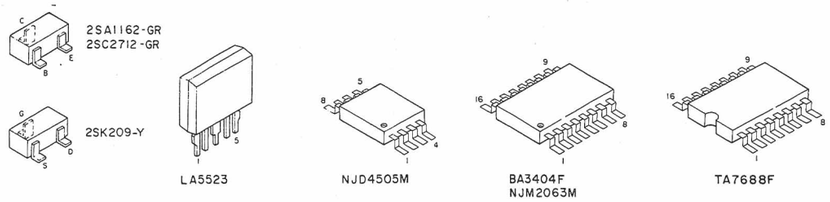
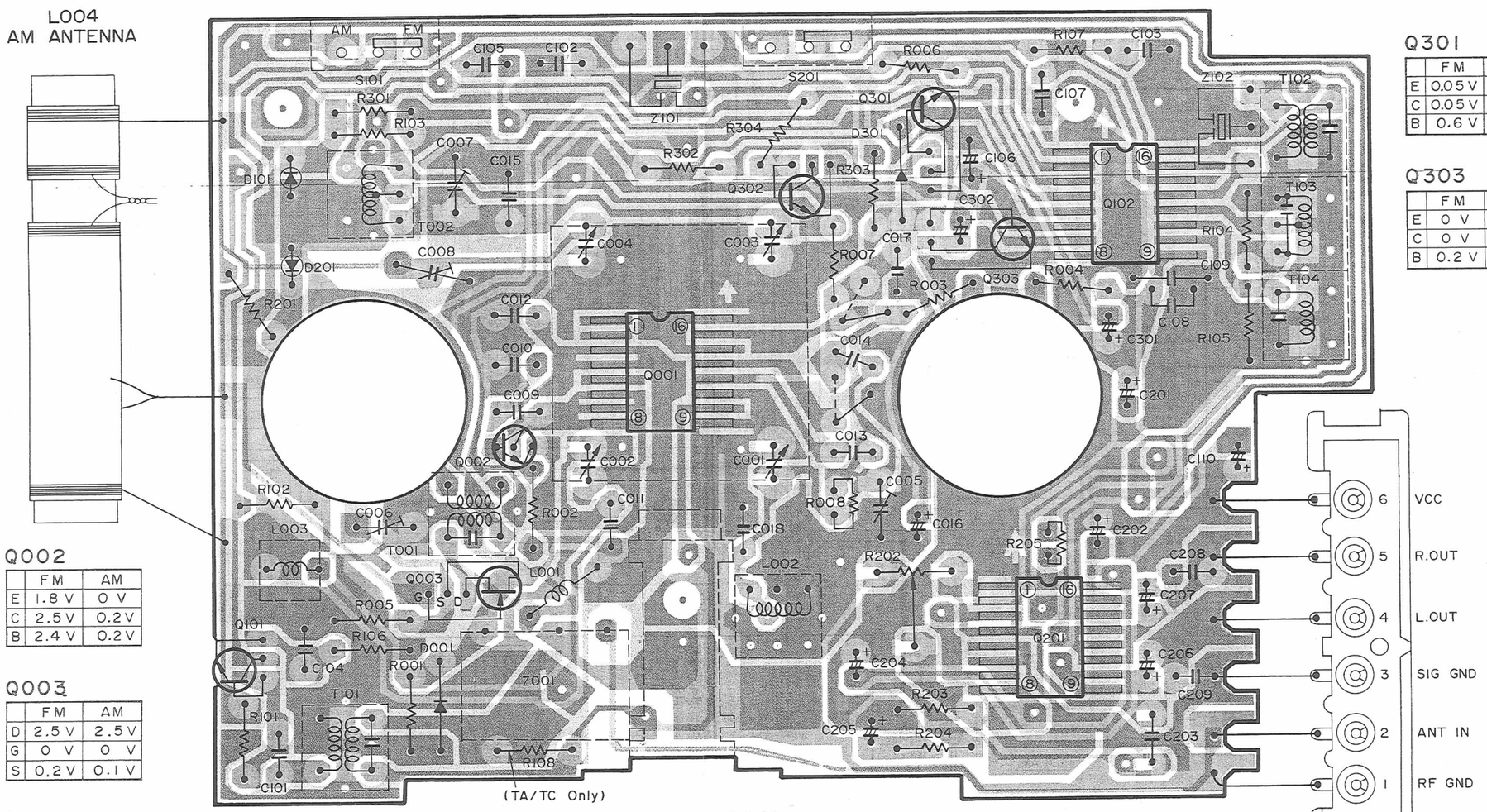


Figure 25

6-2. ELECTRICAL PARTS LOCATIONS

— TUNER PACK SECTION —



Q102

	1	2	3	4	5	6	7	8
FM	0.05V	0.05V	2.5V	1.4V	1.4V	0.1V	1.5V	0V
AM	0.9V	0.9V	0.2V	1.4V	1.4V	0V	2.4V	0V
FM	0.9V	2.5V	2.5V	2.5V	2.2V	2.2V	2.2V	2.5V
AM	1.1V	2.5V	2.5V	2.5V	2.1V	2.2V	2.4V	2.5V
	9	10	11	12	13	14	15	16

Q302

	FM	AM
E	0V	0V
C	0.05V	1.7V
B	0.6V	0.2V

Q301

	FM	AM
E	0.05V	1.7V
C	0.05V	1.7V
B	0.6V	2.2V

Q303

	FM	AM
E	0V	0V
C	0V	0V
B	0.2V	0.6V

Q002

	FM	AM
E	1.8V	0V
C	2.5V	0.2V
B	2.4V	0.2V

Q003

	FM	AM
D	2.5V	2.5V
G	0V	0V
S	0.2V	0.1V

Q101

	FM	AM
E	0.8V	0.2V
C	2.4V	0.2V
B	1.3V	0.7V

Q001

	1	2	3	4	5	6	7	8
FM	0V	1.7V	2.5V	2.5V	1.7V	2.5V	2.5V	2.5V
AM	0V	0V	0.2V	0.2V	0V	0.2V	0.2V	0.2V
FM	0V	2.5V	0V	2.2V	0V	0V	0.3V	0V
AM	0V	0.2V	0V	0.2V	0V	0V	0.4V	0V
	9	10	11	12	13	14	15	16

Q201

	1	2	3	4	5	6	7	8
FM	2.5V	2.5V	2.1V	2.1V	0V	0V	1.5V	1.7V
AM	2.5V	2.5V	1.8V	1.8V	0V	0V	1.8V	2.5V
FM	0.9V	0.9V	0.9V	0.9V	0.9V	0.6V	0.6V	1.7V
AM	0.9V	0.9V	0.9V	0.9V	0.9V	0.6V	0.6V	1.7V
	9	10	11	12	13	14	15	16

Figure 26

10-1. PARTS LIST

— CASSETTE PLAYER SECTION —

Symbol No.	Part No.	Description
	MECHANISM PARTS	
1	22125842	Motor
3	25755573	Belt, Main
4	22217435	HRPT-435
6A	25717561	Pressure Roller Ass'y, Right
6B	25717559	Pressure Roller Ass'y, Left
7	25712432	Reel Plate Ass'y, Right
8	25712433	Reel Plate Ass'y, Left
9A	25717562	Flywheel Ass'y, Right
9B	25717563	Flywheel Ass'y, Left
10	25733495	Mechanism Cover
11	25776571	Spring
12	25779326	Spring, Holder
15	22703118	E Ring, 2ϕ
16	25735159	E Ring, 1.5ϕ
17	25748984	Reverse Release Lever
18	25748985	Reverse Operation Lever
19	25748986	Reverse Operation Lever
20	25726677	Boss
21	25754442	Washer
22	25756348	Gear, Reverse Cam
23	25766050	Washer, 4ϕ
24	25776565	Spring
25	25776567	Spring
26	25777178	Sping
27	25784051	Lever, Friot
28	25784052	Lever, Reverse Detector
29	25725445	Holder
30	25726673	Spacer, Motor
32	25756346	Gear, FF Relay
33	35756347	Gear, Play Relay
34	24756351	Gear, Play Left
35	25756352	Gear, Play Right
36	25761492	Cushion, Motor
37	25766079	Washer, 1.2ϕ
38	25766082	Washer, 2ϕ
39	25766100	Washer, 2.1ϕ
40	25776566	Spring
41	25777268	Spring
42	25791653	Main Chassis Ass'y
43	25726655	Boss
44	25748944	Lever, Play
45	25748945	Lever, Lock
46	25748946	Lever, Switch
47	25748947	Play Cut Lever, Left
48	25748948	Play Cut Lever, Right
49	25776569	Spring
50	25783318	Chip, Play Cut Lever, Right
51	25783319	Chip, Play Cut Lever, Left
52	25757129	Steel Hall
53	25775254	Spring
54	25776580	Spring
55	25776568	Spring
57	25776572	Spring
58	25779268	Spring
59	25779325	Spring
60	25779327	Spring
61	25779328	Spring
63	25783347	Button, Stop
64	25716313	Button Ass'y
67	25791568	Take-up Gear Ass'y
68	25717567	Head Lever Ass'y
69	25791632	Cassette Holeder Ass'y
71	25713585	Pully Relay Ass'y
72	25766136	Washer, 1.2ϕ
78	25766099	Washer, 2.1ϕ
79	25766135	Washer, 2ϕ
80	22707678	Screw, 1.4ϕ x 1.6ϕ, FLT
81	22707969	Screw, 1.4ϕ x 1.2mm, PAN
82	22707978	Screw, 1.7ϕ x 2.5mm, PAN
83	22707862	Screw, 1.7ϕ x 2mm, PAN
84	22707737	Screw, 1.7ϕ x 6mm, PANFL
85	22707496	Screw, 1.4ϕ x 2.5mm, PAN
86	22707971	Screw, 1.4ϕ x 1.8mm, PAN
87	22707832	Screw, 1.4ϕ x 2.5mm, PAN
88	22707970	Screw, 1.7ϕ x 3mm, PAN
89	22707830	Screw, 1.7ϕ x 1.6mm, PAN
90	22707956	Screw, 1.4ϕ x 1.6mm, PAN
91	22707967	Screw, 1.4ϕ x 1.2mm, PAN
93	22707968	Screw, 2ϕ x 2.5mm, PAN
94	25726691	Boss
98	25748981	Lever, REC
100	25776620	Spring
101	25783349	Guide, Erase Head
103	22218267	Erase Head Ass'y
106	25748982	Lever, REC Stop
107	25766138	Washer, 6ϕ
108	25775259	Wire, REC Stop
109	25776660	Spring
111	25714215	REC Slider Ass'y
114	25776622	Spring
115	25776609	Spring
116	25778139	Spring
118	25761508	Cushion, Sheet
119	22708081	Screw, 1.7ϕ x 1.8mm, PAN

Symbol No.	Part No.	Description
	CABINET PARTS	
301	25883054	Front Cabinet Ass'y
302	25883041	Back Cabinet Ass'y
303	25882299	Battery Cover
304	25886042	Button, FF
305	25886043	Button, REC
306	25847271	Button, Shaft
307	25847272	Spring, Button
308	25847280	Spring, Button
309	25777149	Spring, Lock
310	25886044	Button, Lock
313	22900142	Label, Caution
314	22900295	Name Label
317	25777273	Spring, Battery
318	25837983	Knob, Slide Switch
319	25837984	Knob, Reverse Select
320	25837985	Knob, Volume
321	25847285	Battery Contact
322	25781251	Connector
323	25735239	Washer, 2ϕ
324	25775260	Wire
325	25848032	Holder, A
326	25848033	Holder, B
327	25781277	Holder , Jack
330	22707216	Screw, 1.7ϕ x 1.8mm
331	22707612	Screw, 1.4ϕ x 3mm, PANFL
332	22707680	Screw, 1.7ϕ x 3mm, BID
333	22707725	Screw, 1.7ϕ x 2.5mm, PAN
334	22707831	Screw, 1.7ϕ x 2.5mm, PAN
335	22707832	Screw, 1.4ϕ x 2.5mm, PAN
336	22707862	Screw, 1.7ϕ x 2mm, PAN
337	22707914	Screw, 1.4mm, Special
338	22707978	Screw, 1.7ϕ x 2.5mm, PAN

Symbol No.	Part No.	Description
	TRANSISTORS, IC'S & DIODES	
Q301	A5641140	Transitor, 2SA1162-GR
Q302	B0356885	IC, TA7688F
Q401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412	A6043330	Transistor, 2SK209-Y
Q413, 414	A6541140	Transistor, 2SA1162-GR
Q415, 416, 417, 418, 419, 420, 421	A6335480	Transistor, 2SC22712-GR
Q422	22117162	IC, BA3404F
Q423	22117228	IC, NJD4505M
Q501, 502	A6335480	Transistor, 2SC2712-GR
Q503	22117161	IC, NJM 2063M
Q901	A6541140	Transistor, 2SA1162-GR
Q902	22117214	IC, LA5523
D301	22115863	Diode, 1M60
D302, 303, 304	22115523	Diode, LED PR2202S
D401, 501	A7246703	Diode, 1S1555V
	ELECTRICAL PARTS	
L301	22292153	Coil, Choke, 1.2μH
L302	22241068	Coil, Choke, 1.2μH, TDK
T401	22235021	Coil, Oscillator
S101, 102	22196181	Switch, Slide, Tape Selecter
S201, 202	22196288	Switch, Slide, Record/ Playback
S401	22196182	Switch, Slide, Dolby
S501, 502	22196222	Switch, Leaf, Reverse
S901	22196221	Switch, Leaf, Power
J001	22198034	Jack, 3.5ϕ, Mic
J002	22198021	Jack, 3.5ϕ, Phones
J003	22163936	Jack, Power
EP01	22192384	Main P.C. Board Ass'y
EP02	22192270	Volume P.C. Board

Symbol No.	Part No.	Description
CAPACITORS D = ±0.5pF, J = ±5%, K = ±10%, M = ±20%, Z = $^{+80}_{-20}$ % ABBREVIATIONS: TT = Tantalum, EL = Electrolytic PS = Polystyrene, CD = Ceramic Disk, MY = Mylar MPF = Metalized Polyester Film		
C301, 302	22490123	TT, 2.2mfd, 4V, M
C303, 304	22490033	TT, 1mfd, 10V, M
C305	22440627	EL, 220mfd, 4V
C306	22440516	EL, 220mfd, 4V
C307	22490080	TT, 6.8mfd, 6.3V
C308	22440516	EL, 220mfd, 4V
C309	22440540	EL, 22mfd, 4V
C310	22311100	Chip, 10pF, 50V, D
C311	22311470	Chip, 47pF, 50V, J
C401, 402	22314681	Chip, 680pF, 50V, K
C403, 404	22440540	EL, 22mfd, 4V
C405, 406	22380266	MPF, 0.01mfd, 50V, J
C407, 408	22314222	Chip, 2200pF, 50V, K
C409, 410, 411, 412	22317473	Chip, 0.047mfd, 25V, M
C413, 414, 415, 416	22490123	TT, 2.2mfd, 4V, M
C417, 418	22314222	Chip, 2200pF, 50V, K
C421, 422	22490065	TT, 0.47mfd, 6.3V, M
C423	22370326	PS, 1000pF, 50V, J
C424	22315223	Chip, 0.022mfd, 25V, K
C425	22315103	Chip, 0.01mfd, 25V, K
C426, 427	22440518	EL, 47mfd, 4V
C428	22440627	EL, 220mfd, 4V
C430	22490081	TT, 10mfd, 4V, M
C431, 432	22314222	Chip, 2200pF, 50V, K
C433, 434	22440540	EL, 22mfd, 4V
C435	22312473	Chip, 0.047mfd, 50V, Z
C436	22440627	EL, 220mfd, 4V
C501, 502	22490123	TT, 2.2mfd, 4V, M
C503, 504	22314682	Chip, 6800pF, 50V, K
C505, 506	22380267	PS, 0.033mfd, 50V, J
C507, 508	22317473	Chip, 0.047mfd, 25V, M
C509, 510	22490065	TT, 0.47mfd, 6.3V, M
C511, 512	22314472	Chip, 4700pF, 50V, K
C513	22440628	EL, 100mfd, 4V
C514	22490081	TT, 10mfd, 4V, M
C901, 902	22440540	EL, 22mfd, 4V
C904	22490070	TT, 2.2mfd, 10V, M
C990	22360367	CD, 2200pF, 50V, K

Symbol No.	Part No.	Description
RESISTORS Chip Resistors are Metal Oxide Resistor 1/8W, ±5% others are Carbon Film 1/8W, ±5%, unless otherwise noted. K = 1,000, M = 1,000, 000		
R301, 302	22611405	10K ohm, Variable Volume
R303, 304	22421229	2.2 ohm, Chip
R305	22521822	8.2K ohm Chip
R306	22521471	470 ohm, Chip
R307, 308	22521563	56K ohm, Chip
VR401, 402	22658714	500 ohm, Semi-fixed Variable
R401, 402, 403, 404. 405, 406	22521106	10M ohm, K, Chip
R407, 408	22521823	82K ohm, Chip
R411, 412	22521334	330K ohm, Chip
R413, 414	22521682	6.8K ohm, Chip
R415, 416	22521562	5.6K ohm, Chip
R417, 418, 419, 420	22521106	10M ohm, K, Chip
R421, 422	22521822	8.2K ohm, Chip
R423, 424	22521331	330 ohm, Chip
R425, 426	22521682	6.8K ohm, Chip
R427, 428	22521223	22K ohm, Chip
R429, 430	22521681	680 ohm, Chip
R431, 432	22521473	47K ohm, Chip
R435, 436	22521106	10M ohm, K, Chip
R437, 438	22521472	4.7K ohm, Chip
R440	22521101	100 ohm, Chip
R441	22521562	5.6K ohm, Chip
R442	22521221	220 ohm, Chip
R443	22521225	2.2M ohm, Chip
R444	22521102	1K ohm, Chip
R445	22521105	1M ohm, Chip
R446	22521563	56K ohm, Chip
R447	22521103	10K ohm, Chip
R448	22521104	100K ohm, Chip
R449, 450	22521105	1M ohm, Chip
R451, 452	22521103	10K ohm, Chip
R455, 456	22521473	47K ohm, Chip
R457, 458	22421472	4.7K ohm, Chip
R459, 460	22521563	56K ohm, Chip
R461	22521272	2.7K ohm, Chip
R462	22521471	470 ohm, Chip
R465	22521152	1.5K ohm, Chip
R467	22521222	2.2K ohm, Chip
R468	22521105	1M ohm, Chip
R469, 470	22521103	10K ohm, Chip
R471	22521102	1K ohm, Chip

Symbol No.	Part No.	Description
R501, 502	22521682	6.8K ohm, Chip
R503, 504	22521474	470K ohm, Chip
R505, 506	22521332	3.3K ohm, Chip
R507, 508, 509, 510	22521473	47K ohm, Chip
R511	22521563	56K ohm, Chip
VR901	22658720	5K ohm, Semi-fixed Variable

Symbol No.	Part No.	Description
R901	22521103	10K ohm, Chip
R902	22521182	1.8K ohm, Chip
R903	22500343	130 ohm, Carbon Film
R904	22521472	4.7K ohm, Chip
R905	22521562	5.6K ohm, Chip
R906	22521821	820 ohm, Chip
R907	22115907	Thermistor
R908	22521103	10K ohm, Chip

9-2. CABINET EXPLODED VIEW

— TUNER PACK SECTION —

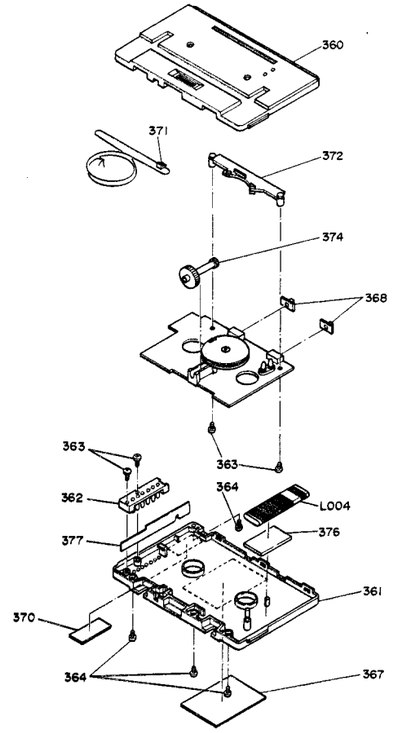


Figure 30

10-2. PARTS LIST

— TUNER PACK SECTION —

Symbol No.	Part No.	Description
CABINET PARTS		
360	22881213	Cabinet, Upper
361	22882038	Cabinet, Bottom
362	22161726	Contact 6P
363	22707638	Screw, 1.7ϕ x 4.5mm, BID, BLK
364	22707662	Screw, Special
367	22866211	Name Label (TA, TC)
367	22866212	Name Label (AY, YY)
368	22884242	Cap, Knob
370	22900142	Label, Caution
371	22741393	Pointer
TRANSISTOR, ICS AND DIODES		
Q001	B0325275	IC, TA7335F
Q002	A6332530	Transistor, 2SC2688-O
Q003	A6042620	Transistor, FET, 2SK161-O
Q101	A6332430	Transistor, 2SC2458-Y
Q102	B0356876	IC, TA7687AF
Q201	B0325335	IC, TA7342F
Q301, 302, 303	A6332430	Transistor, 2SC2458-Y
D001	A7246703	Diode, 1S1555V
D101	A8606201	Diode, LED, TLG-124A
D201	A8601150	Diode, LED, TLR-124
D301	22115863	Diode, 1M60
ELECTRICAL PARTS		
L001	22295141	Coil, LH010-5.5T
L002	22295151	Coil, LH010-AF2
L003	22241067	Coil, CH1067
L004	22242918	Coil, AM Antenna

Symbol No.	Part No.	Description
T001	22264864	IF Transformer, AM, RF
T002	22245414	Coil, AM
T101	22265837	IF Transformer, FM
T102	22264865	IF Transformer, AM
T103	22267419	IF Transformer, FM, Quad
T104	22266388	IF Transformer, AM, Detector
Z001	22153222	Filter, FM, Band-Pass, BPMB6
Z101	22153260	Filter, Ceramic, FM, 10.7MA511 (TA, TC)
Z101	22153261	Filter, Ceramic, FM, 10.7MJ11 (AY, YY)
Z102	22153206	Filter, Ceramic, AM, TER-455BL (TA, TC)
Z102	22153220	Filter, Ceramic, AM, TER-460BL (AY, YY)
S101 ∿ 102	22196060	Switch, AM, FM Select
S201 ∿ 202	22196060	Switch, MONO, ST Select
CAPACITORS		
D = ±0.5pF, J = ±5%, K = ±10%, M = ±20% ABBREVIATIONS: CD = Ceramic Disk, EL = Electrolytic TT = Tantalum, BL = Barrier Layer, PS = Polystylene		
C001, 002, 003, 004	22308560	Poly Variable Capacitor
C005	22309191	Trimmer, 10pF
C006	22309191	Trimmer, 10pF
C007	22309190	Trimmer, 6pF
C008	22309159	Trimmer, 10pF
C009	22361120	CD, 12pF, 50V, J
C010, 011, 012	22349102	CD, 1000pF, 50V, K
C013	22362101	CD, 100pF, 50V, K
C014	22360478	CD, 2pF, 50V, D
C015	22361609	CD, 6pF, 50V, D
C016	22440439	EL, 0.1mfd, 50V
C017	22349102	CD, 1000pF, 50V, K
C018	22360177	CD, 15pF, 50V, J
C101	22349102	CD, 1000pF, 50V, K

Note: The Tuner Pack for "FY" is optional.

Symbol No.	Part No.	Description
C102	22360605	BL, 0.015mfd, 25V, M
C103, 104	22360723	BL, 2200pF, 25V, M
C105	22360605	BL, 0.015mfd, 25V, M
C106	22440441	EL, 1mfd, 50V
C107	22360605	BL, 0.015mfd, 25V, M
C108	22349221	CD, 220pF, 50V, K
C109	22360608	BL, 0.047mfd, 25V, M
C110	22440277	EL, 22mfd, 6.3V
C201	22440440	EL, 0.47mfd, 50V
C202	22440441	EL, 1mfd, 50V
C203	22380071	PS, 1000pF, 125V, J
C204	22490106	TT, 0.47mfd, 20V
C205, 206, 207	22440320	EL, 0.22mfd, 50V
C208, 209	22360605	BL, 0.015mfd, 25V, M
C301	22440439	EL, 0.1mfd, 50V
C302	22440277	EL, 22mfd, 6.3V

RESISTORS

All resistors are carbon film 1/6W, ±5%, unless otherwise noted. K = 1000, M = 1000000.

R001	22584472	4.7K ohm
R002	22584222	2.2K ohm
R003	22584104	100K ohm
R004	22584224	220K ohm
R005	22584121	120 ohm
R006	22584471	470 ohm
R007	22584103	10K ohm
R101	22584103	10K ohm
R102	22584331	330 ohm
R103	22584151	150 ohm
R104	22584392	3.9K ohm
R105	22584473	47K ohm
R106	22584222	2.2K ohm
R107	22584681	680 ohm
R108	22584183	18K ohm, (TA, TC only)
R201	22584331	330 ohm
R202	22658654	10K ohm, Semi-fixed Variable Resistor
R203	22584103	10K ohm
R204	22584102	1K ohm
R205	22570402	4.7K ohm, Metal Film
R301, 302, 303	22584103	10K ohm
R304	22584473	47K ohm

11-1. HEADPHONE EXPLODED VIEW

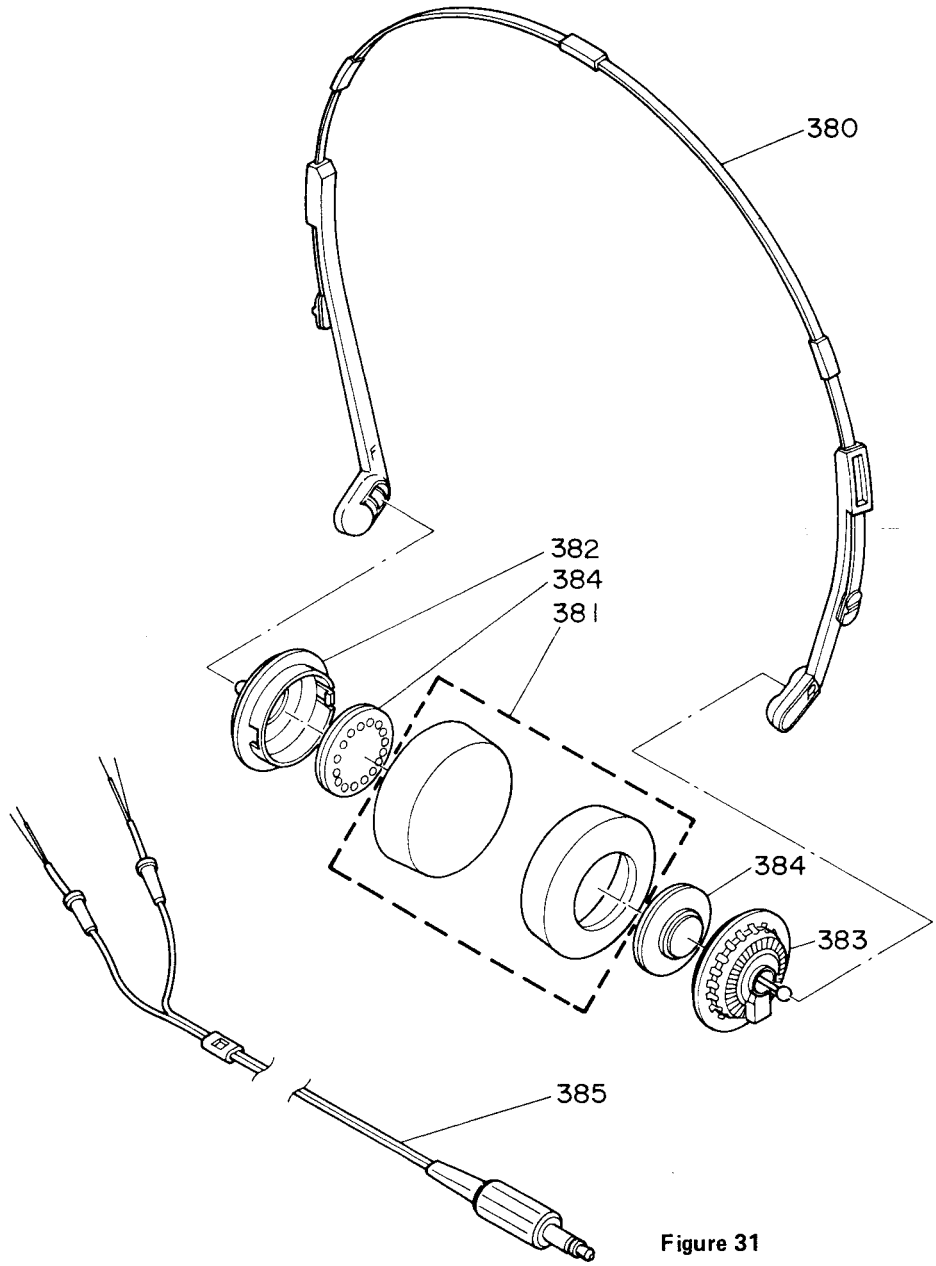


Figure 31

11-2. HEADPHONE PARTS (HR-MV1-ONK-B)

Symbol No.	Part No.	Description
380	22810104	Head Band Ass'y
381	22810087	Ear Pad Ass'y
382	22810087	Housing, L
383	22810089	Housing, R
384	22810090	Driver Unit
385	22810091	Cord Ass'y with Plug

12-1. UNIT HOLDER EXPLODED VIEW

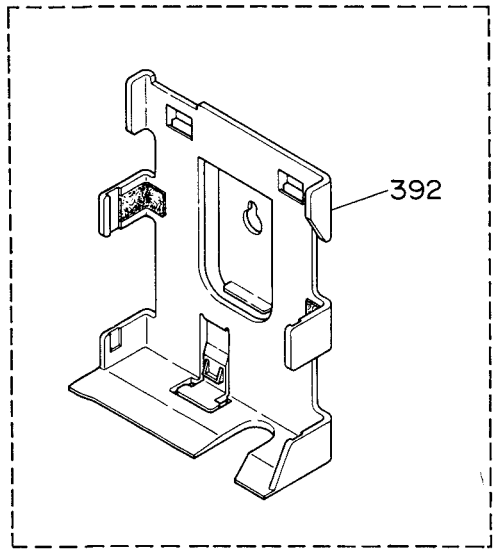


Figure 32

12-2. UNIT HOLDER PARTS LIST

Symbol No.	Part No.	Description
392	22991112	Unit Holder Ass'y

13. ACCESSORIES PARTS LIST

Symbol No.	Part No.	Description
AC01	22903705	Owner's Manual (TA)
AC01	22903706	Owner's Manual (TC)
AC01	22903707	Owner's Manual (AY)
AC01	22903708	Owner's Manual (YY, FY)
AC02	22991102	Belt
AC03	25881939	Stereo Mic Ass'y